



U.S. Department of Energy
Office of River Protection

P.O. Box 450, MSIN H6-60
Richland, Washington 99352

0073713

AUG 09 2007

07-ESQ-129

Ms. Jane A. Hedges, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
3100 Port of Benton Blvd.
Richland, Washington 99354

RECEIVED
AUG 15 2007

EDMC

Dear Ms. Hedges:

SUBMITTAL OF HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY
ACT (RCRA) PERMIT MODIFICATION NOTIFICATION FORM 24590-LAW-PCN-ENV-
06-014

Reference: WA7890008967, "Dangerous Waste Portion of the Hanford Facility Resource
Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of
Dangerous Waste, Part III, Operating Unit 10, 'Waste Treatment and
Immobilization Plant.'"

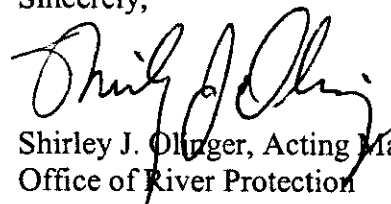
This letter submits the Hanford Facility RCRA Permit Modification Notification Form 24590-
LAW-PCN-ENV-06-014 (Attachment 1). The form describes a requested Class 1 modification
to the Reference requiring approval from the Washington State Department of Ecology
(Ecology). A Bechtel National, Inc. certification statement is provided in Attachment 2.

Modification Notification Form 24590-LAW-PCN-ENV-06-014 updates the process flow
diagram for Low-Activity Waste Vitrification Secondary Offgas Treatment (24590-LAW-M5-
V17T-P0011) in Appendix 9.1 of the Reference.

Ecology was provided an opportunity to review the modification notification form and the
associated information and comments were dispositioned.

If you have any questions, please contact me, or your staff may contact Lori A. Huffman, Office
of Environmental Safety and Quality, (509) 376-0104.

Sincerely,


Shirley J. Olinger, Acting Manager
Office of River Protection

ESQ:LAH

Attachments: (2)

cc: See page 2

Ms. Jane A. Hedges
07-ESQ-129

-2-

AUG 09 2007

cc w/attachs:

Administrative Record *H-0-8*
BNI Correspondence
Environmental Portal, LMSI

cc electronic:

W. S. Elkins, BNI
B. G. Erlandson, BNI
P. A. Fisher, BNI
J. S. Hill, BNI
S. Murdock, BNI
P. Peistrup, BNI
D. Robertson, BNI
B. Becker-Khaleel, Ecology
E. A. Fredenburg, Ecology
T. Gao, Ecology
A. A. Hamar, Ecology
S. A. Thompson, FHI
A. C. McKarns, RL
D. J. Sommer, SCS

cc w/o attachs:

D. A. Klein, BNI
J. Cox, CTUIR
S. Harris, CTUIR
L. Cusack, Ecology
S. L. Dahl, Ecology
G. P. Davis, Ecology
G. Bohnie, NPT
K. Niles, Oregon Energy
R. Jim, YN

Attachment 1
07-ESQ-129

Hanford Facility RCRA Permit Modification Notification
Form 24590-LAW-PCN-ENV-06-014

Quarter Ending September 30,
2007

24590-LAW-PCN-ENV-06-014

Hanford Facility RCRA Permit Modification Notification Form**Part III, Operating Unit 10****Waste Treatment and Immobilization Plant**

Index


Page 2 of 3: Hanford Facility RCRA Permit, Operating Unit 10, Waste Treatment and Immobilization Plant
Update LAW Vitrification Building Process Flow Diagram (PFD) for LAW Vit Secondary Offgas Treatment
(24590-LAW-M5-V17T-P0011) in Appendix 9.1 of the Dangerous Waste Permit.

Submitted by Co-Operator:

Reviewed by ORP Program Office:



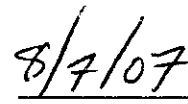
D. A. Klein



Date



S. J. Olinger



Date

Quarter Ending September 30,
2007

24590-LAW-PCN-ENV-06-014

Hanford Facility RCRA Permit Modification Notification Form	
Unit:	Permit Part & Chapter:
Waste Treatment and Immobilization Plant	Part III, Operating Unit 10
<p><u>Description of Modification:</u></p> <p>The purpose of the modification is to update a LAW process flow diagram (PFD) for the LAW vitrification secondary offgas treatment system, identified as 24590-LAW-M5-V17T-P0011, Rev. 0, located in Appendix 9.1 of the Dangerous Waste Permit (DWP).</p> <p>Ecology is requested to approve the following changes to the subject PFD:</p> <ol style="list-style-type: none"> Note 12 is changed from: "Vessels must have the capability to be washed and to transfer the wash effluent or off-specification material to RLD-VSL-00003." To: "Vessels must have the capability to be washed and to transfer the wash effluent or off-specification material to RLD-VSL-00003 (via floor drain LVP-FD-00001)." Note 13 revised from: "Controlled by differential NH3 and NOX across LVP-SKID-00002 or inlet temperature." To: "Controlled by differential NOX across LVP-SKID-00002 or inlet temperature." Added Note 17 "This revision incorporated DCNs associated with the source drawing. LVP-SKID-00003 added per vendor design. Added "floor drain" to Note 12 for clarification. Changed offsheet connector from "LAW-P0016" to "LAW-00016". A permit version of 24590-LAW-M5-V17T-00016 will not be issued." Corrected document number in Reference 2. Revise from: "24590-PTF-M5-V17T-P0001, "Process Flow Diagram Legends & Symbols" To: "24590-WTP-M5-V17T-P0001, "Process Flow Diagram Legends & Symbols" Added Reference "11. (Deleted)", as Reference 11 was added to the source drawing, but is not applicable to the permit version. Revised the valve for plant service water additions to LVP-TK-00001 from being normally open to being normally closed. The portion of the transfer line shown in LVP-TK-00001, which goes to LVP-PMP-00002 A/B, was shown incorrectly and is being deleted. This does not affect the design of the system. A reference to Note 12 is being added to the "Overflow to Berm" for LVP-TK-00001. The plant item number for LVP-PMP-00001 A/B is changing to "LVP-PMP-00003 A/B" as a result of a pump flowrate change from 60 gpm to 200 gpm per vendor recommendation. Revised non-permit affecting offsheet connector label for the 5M caustic solution from SHR-TK-00003 from: "LAW-P0016" to "LAW-00016". A permit version of the source will not be issued as the source drawing contains only systems associated with cold chemical product. Revised non-permit affecting offsheet connector label from "Ammonia Vapor from AMR-VSL-00001/2" to "Ammonia Vapor from AMR-VSL-00003/4." The vessels are renumbered because they are being transferred to BOF. Added a NOx indicator to waste stream LVP08 prior to entry into LVP-SKID-00001. Revised the instrumentation on waste stream LVP26 prior to entering LVP-SKID-00002 Revised from the following indicators: NOx, VOC, temperature, and NH3. To indicators for the following: HF, temperature, and HCL. The NOx indicator is being moved to the carbon adsorber inlet as identified in Change #12. The VOC and NH3 indicators are being replaced with HF and HCL indicators to reflect the vendor design. Added a NOx indicator to waste stream LVP23 prior to the temperature indicator in LVP-SKID-00002. The plant item number for LVP-BLWR-00001 A/B is being corrected to "LVP-FAN-00001/2" 	

Quarter Ending September 30,
2007

24590-LAW-PCN-ENV-06-014

consistent with the tag names in the vendor package.

16. LVP-FAN-00001/2 and associated air piping along with ammonia vapor from AMR-VSL-00003/4 is being split from LVP-SKID-00002 and is now its own (new) skid, LVP-SKID-00003. LVP-SKID-00003 is also added to the plant item number and descriptions at the top of the drawing.
17. Added a HEPA filter to LVP-SKID-00003 dilution air prior to LVP-FAN-00001/2 to depict the vendor design.
18. The bypass associated with LVP-HX-00001 has been reconfigured to indicate the vendor design.
19. The symbol for LVP-FAN-00001/2 is corrected from a centrifugal pump symbol to a fan symbol.
20. Bolded notes and reworded Note 16 to read: "The components shown on this drawing in phantom do not require Independent Qualified Registered Professional Engineer assessments of design or installation inspections by a qualified installation inspector in accordance with the DWP and/or Washington Administrative Code requirements."

Please replace the following in Appendix 9.1 of the Dangerous Waste Permit.

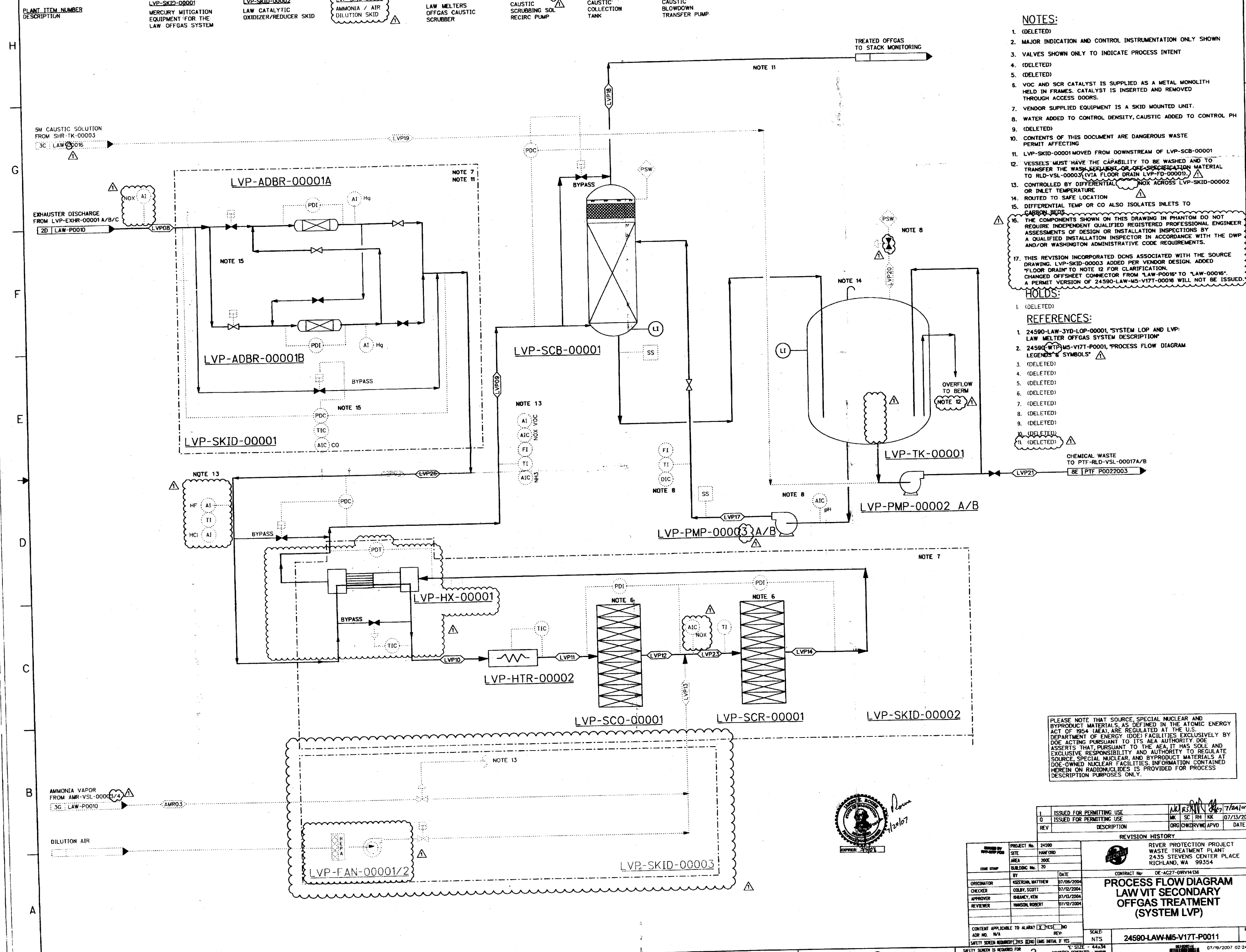
Appendix 9.1			
Replace:	24590-LAW-M5-V17T-P0011, Rev. 0	With:	24590-LAW-M5-V17T-P0011, Rev. 1

WAC 173-303-830 Modification Class: ^{1 2}	Class 1	Class ¹ 1	Class 2	Class 3
Please mark the Modification Class:	X			
Enter Relevant WAC 173-303-830, Appendix I Modification citation number: A.1 and A.3				
Enter wording of WAC 173-303-830, Appendix I Modification citation:				
A.1. Administrative and informational changes				
A.3. Equipment replacement or upgrading with functionally equivalent components (e.g., pipes, valves, pumps, conveyors, controls)				
Modification Approved: <input type="checkbox"/> Yes <input type="checkbox"/> No (state reason for denial)			Reviewed by Ecology:	
Reason for denial:				
			B. Becker-Khaleel	
			Date	

¹ Class 1 modifications requiring prior Agency approval.

² If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to a Class '1, if applicable.

24590-LAW-M5-V17T-P0011



- NOTES:**
- (DELETED)
 - MAJOR INDICATION AND CONTROL INSTRUMENTATION ONLY SHOWN
 - VALVES SHOWN ONLY TO INDICATE PROCESS INTENT
 - (DELETED)
 - (DELETED)
 - VOC AND SCR CATALYST IS SUPPLIED AS A METAL MONOLITH HELD IN FRAMES. CATALYST IS INSERTED AND REMOVED THROUGH ACCESS DOORS.
 - VENDOR SUPPLIED EQUIPMENT IS A SKID MOUNTED UNIT.
 - WATER ADDED TO CONTROL DENSITY, CAUSTIC ADDED TO CONTROL PH
 - (DELETED)
 - CONTENTS OF THIS DOCUMENT ARE DANGEROUS WASTE PERMIT AFFECTING
 - LVP-SKID-00001 MOVED FROM DOWNSTREAM OF LVP-SCB-00001
 - VESSLS MUST HAVE THE CAPABILITY TO BE WASHED AND TO TRANSFER THE WASH EFFLUENT OR OFF-SPECIFICATION MATERIAL TO RLD-VSL-00003 (VIA FLOOR DRAIN LVP-FD-00001)
 - CONTROLLED BY DIFFERENTIAL NOX ACROSS LVP-SKID-00002 OR INLET TEMPERATURE
 - ROUTED TO SAFE LOCATION
 - DIFFERENTIAL TEMP OR CO ALSO ISOLATES INLETS TO CARBON BEDS
 - THE COMPONENTS SHOWN ON THIS DRAWING IN PHANTOM DO NOT REQUIRE INDEPENDENT QUALIFIED REGISTERED PROFESSIONAL ENGINEER ASSESSMENTS OF DESIGN OR INSTALLATION INSPECTIONS BY A QUALIFIED INSTALLATION INSPECTOR IN ACCORDANCE WITH THE DWP AND/OR WASHINGTON ADMINISTRATIVE CODE REQUIREMENTS.
 - THIS REVISION INCORPORATED DCNS ASSOCIATED WITH THE SOURCE DRAWING. LVP-SKID-00003 ADDED PER VENDOR DESIGN. ADDED "FLOOR DRAIN" TO NOTE 12 FOR CLARIFICATION. CHANGED OFFSHEET CONNECTOR FROM "LAW-P0016" TO "LAW-00016". A PERMIT VERSION OF 24590-LAW-M5-V17T-P0011 WILL NOT BE ISSUED.

- HOLDS:**
- (DELETED)
- REFERENCES:**
- 24590-LAW-3YD-L0P-00001 "SYSTEM LOP AND LVP: LAW MELTER OFFGAS SYSTEM DESCRIPTION"
 - 24590-LAW-M5-V17T-P0001 "PROCESS FLOW DIAGRAM LEGENDS & SYMBOLS"
 - (DELETED)
 - (DELETED)
 - (DELETED)
 - (DELETED)
 - (DELETED)
 - (DELETED)
 - (DELETED)
 - (DELETED)
 - (DELETED)

PLEASE NOTE THAT SOURCE SPECIAL NUCLEAR AND BYPRODUCT MATERIALS, AS DEFINED IN THE ATOMIC ENERGY ACT OF 1954 (AEA), ARE REGULATED AT THE U.S. DEPARTMENT OF ENERGY (DOE) FACILITIES EXCLUSIVELY BY DOE ACTING PURSUANT TO ITS AEA AUTHORITY (DOE). DOE ASSUMES THAT, PURSUANT TO THE AEA, IT HAS SOLE AND EXCLUSIVE RESPONSIBILITY AND AUTHORITY TO REGULATE SOURCE SPECIAL NUCLEAR AND BYPRODUCT MATERIALS AT DOE-OWNED NUCLEAR FACILITIES. INFORMATION CONTAINED HEREIN ON RADIONUCLIDES IS PROVIDED FOR PROCESS DESCRIPTION PURPOSES ONLY.

PROJECT No.	24590	ISSUED FOR PERMITTING USE	07/13/2004
SITE	HANFORD	ISSUED FOR PERMITTING USE	07/13/2004
AREA	200E	DESCRIPTION	ORG/ENGR/IN/APPV DATE
BUILDING No.	20	REVISION HISTORY	
DATE	07/09/2004	CONTRACT No.	DE-AC27-00RV4136
ORIGINATOR	KIEZEL, MATTHEW	RIVER PROTECTION PROJECT	
CHECKER	COLBY, SCOTT	WASTE TREATMENT PLANT	
APPROVER	DEANEY, KEN	2435 STEVENS CENTER PLACE	
REVIEWER	WATSON, ROBERT	RICHLAND, WA 99354	
PROCESS FLOW DIAGRAM LAW VIT SECONDARY OFFGAS TREATMENT (SYSTEM LVP)			
CONTENT APPLICABLE TO ALARM? [X] YES [] NO		SCALE: NTS	
ADP NO. N/A		24590-LAW-M5-V17T-P0011	
SAFETY SCREEN REQUIRED? [X] YES [] NO		REV 1	
SAFETY SCREEN REVIEWED? [X] YES [] NO		07/19/2007 02:24:47	

Attachment 2
07-ESQ-129

Bechtel National, Inc. Certification Statement

Bechtel National, Inc. Certification

The following certification statement is provided consistent with Contract No. DE-AC27-01RV14136, Section H.26, Environmental Permits, paragraph (g) for the submittal of the Hanford Facility Resource Conservation and Recovery Act Permit Modification Notification Form 24590-LAW-PCN-ENV-06-014.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

for 
W. S. Elkins

Project Director


Date